

**ABSTRACT**

A method of forming a heat spreader ball grid array package, and the resultant heat spreader ball grid array package, comprising the following steps. A semiconductor chip affixed to a ball grid substrate is provided. The semiconductor chip over the ball grid substrate is encased with a molding compound. A heat spreader is mounted over the ball grid substrate and spaced apart from the molding compound to form a gap. Thermal grease is placed into the gap, at least between the heat spreader and the molding compound, to form the heat spreader ball grid array package. It is also possible to place thermal grease over the molding compound and then mounting the heat spreader over the ball grid substrate.